# WEST Search History

DATE: Wednesday, February 12, 2003

| Set Name side by side | Query | Hit Count | Set Name result set |
|---|---|---|---|
| *DB=USPT,PGPB,JPAB,DWPI; PLUR=YES; OP=ADJ* | | | |
| L2 | L1 and IRES and coat protein | 2 | L2 |
| L1 | potato virus X | 445 | L1 |

END OF SEARCH HISTORY

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TERMINAL (ENTER 1, 2, 3, OR ?):2


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NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY
NEWS 15 Jul 30 NETFIRST to be removed from STN
NEWS 16 Aug 08 CANCERLIT reload
NEWS 17 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18 Aug 08 NTIS has been reloaded and enhanced
NEWS 19 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)
        now available on STN
NEWS 20 Aug 19 IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced
NEWS 23 Sep 03 JAPIO has been reloaded and enhanced
NEWS 24 Sep 16 Experimental properties added to the REGISTRY file
NEWS 25 Sep 16 CA Section Thesaurus available in CAPLUS and CA
NEWS 26 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985
NEWS 27 Oct 21 EVENTLINE has been reloaded
NEWS 28 Oct 24 BEILSTEIN adds new search fields
NEWS 29 Oct 24 Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 30 Oct 25 MEDLINE SDI run of October 8, 2002
NEWS 31 Nov 18 DKILIT has been renamed APOLLIT
NEWS 32 Nov 25 More calculated properties added to REGISTRY
NEWS 33 Dec 02 TIBKAT will be removed from STN
NEWS 34 Dec 04 CSA files on STN
NEWS 35 Dec 17 PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 36 Dec 17 TOXCENTER enhanced with additional content
NEWS 37 Dec 17 Adis Clinical Trials Insight now available on STN
NEWS 38 Dec 30 ISMEC no longer available
NEWS 39 Jan 13 Indexing added to some pre-1967 records in CA/CAPLUS
NEWS 40 Jan 21 NUTRACEUT offering one free connect hour in February 2003
NEWS 41 Jan 21 PHARMAML offering one free connect hour in February 2003
NEWS 42 Jan 29 Simultaneous left and right truncation added to COMPENDEX,
        ENERGY, INSPEC

NEWS EXPRESS  January 6 CURRENT WINDOWS VERSION IS V6.01a,
        CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
        AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
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 FILE 'HOME' ENTERED AT 11:22:42 ON 12 FEB 2003

 => FIL BIOSIS EMBASE CAPLUS
 COST IN U.S. DOLLARS                SINCE FILE    TOTAL
                                       ENTRY  SESSION
 FULL ESTIMATED COST                    0.21     0.21

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 => s potato virus X
 L1       2179 POTATO VIRUS X

 => s l1 and IRES and coat protein
 L2         4 L1 AND IRES AND COAT PROTEIN

 => dup rem l2
 PROCESSING COMPLETED FOR L2
 L3         2 DUP REM L2 (2 DUPLICATES REMOVED)

 => d bib abs 1-

 YOU HAVE REQUESTED DATA FROM 2 ANSWERS - CONTINUE? Y/(N):y

 L3  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2003 ACS
 AN  2002:539852  CAPLUS
 DN  137:89449
 TI  ***Potato***  ***virus***  ***X***  vector containing internal
     ribosomal entry site elements for improved transgene expression in plants
 IN  Santa-Cruz, Simon; Pogue, Gregory P.; Toth, Rachel L.; Chapman, Sean;
     Carr, Fiona
 PA  Biosource Genetics Corporation, USA
 SO  PCT Int. Appl., 33 pp.
     CODEN: PIXXD2
 DT  Patent
 LA  English
 FAN.CNT 1
     PATENT NO.      KIND  DATE        APPLICATION NO.  DATE
     --------------- ----  ----------  ---------------  ----------
 PI  WO 2002055719   A2    20020718    WO 2002-US1123   20020109
       W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
          CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
          GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
          LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
          PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
          UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
          TJ, TM
       RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
          CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
          BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 PRAI US 2001-758962  A  20010109
 AB  ***Potato***  ***virus***  ***X***  (PVX)-based vectors were
     generated to investigate use of internal ribosomal entry site (
     ***IRES***  ) elements to direct translation of a viral gene.  An
     ***IRES***  sequence from crucifer-infecting strain of tobacco mosaic
     virus was used to direct expression of the PVX  ***coat***
     ***protein***  .  The  ***IRES***  was inserted downstream of the gene
     encoding green fluorescent protein (GFP) and upstream of the PVX
     ***coat***  ***protein***  in either sense or antisense orientation,
     such that  ***coat***  ***protein***  synthesis was dependent on
     ribosome recruitment to the  ***IRES***  .  Stem loop structures were
     inserted at either 3' or 5' end of the  ***IRES***  to investigate its
     mode of action as these structures block ribosomes.  In vitro RNA
     transcripts were inoculated to Nicotiana benthamiana plants and
     protoplasts, levels of GFP and  ***coat***  ,  ***protein***  expression
     were analyzed by ELISA and the rate of viral cell-to-cell movement was
     detd. by confocal laser scanning microscopy of GFP synthesis.  PVX
     ***coat***  ***protein***  was expressed, allowing cell-to-cell
     movement of virus, from constructs contg. the  ***IRES***  sequence in
     either sense or antisense orientation and from the construct contg. a stem
     loop structure at the 5' end of the  ***IRES***  sequence.  No
     ***coat***  ***protein***  was synthesized from a construct contg. a
     stem loop at the 3' end of the  ***IRES***  sequence.  These results
     suggest that the  ***IRES***  sequence acts in vivo to direct expression
     of the 3' proximal ORF in a bicistronic mRNA thereby demonstrating the
     potential of employing  ***IRES***  sequences for the expression of
     foreign proteins from plant virus-based vectors.

 L3  ANSWER 2 OF 2  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
 AN  2001:114647  BIOSIS
 DN  PREV200100114647
 TI  A novel strategy for the expression of foreign genes from plant virus
     vectors.
 AU  Toth, Rachel L.; Chapman, Sean; Carr, Fiona; Santa Cruz, Simon (1)
 CS  (1) Department of Entomology and Plant Pathology, Horticulture Research
     International, East Malling, Kent, ME19 6BJ: simon.santacruz@hri.ac.uk UK
 SO  FEBS Letters, (2 February, 2001) Vol. 489, No. 2-3, pp. 215-219. print.
     ISSN: 0014-5793.
 DT  Article
 LA  English
 SL  English
 AB  ***Potato***  ***virus***  ***X***  (PVX)-based vector constructs
     were generated to investigate the use of an internal ribosome entry site (
     ***IRES***  ) sequence to direct translation of a viral gene. The
     148-nucleotide IREScp sequence from a crucifer-infecting strain of tobacco
     mosaic virus was used to direct expression of the PVX  ***coat***
     ***protein***  (CP). The  ***IRES***  was inserted downstream of the
     gene encoding green fluorescent protein (GFP) and upstream of the PVX CP,
     in either sense or antisense orientation, such that CP expression depended
     on ribosome recruitment to the  ***IRES***  . Stem-loop structures were
     inserted at either the 3'- or 5'-end of the  ***IRES***  sequence to
     investigate its mode of action. In vitro RNA transcripts were inoculated
     to Nicotiana benthamiana plants and protoplasts: levels of GFP and CP
     expression were analysed by enzyme-linked immunosorbent assay and the rate
     of virus cell-to-cell movement was determined by confocal laser scanning
     microscope imaging of GFP expression. PVX CP was expressed, allowing
     cell-to-cell movement of virus, from constructs containing the
     ***IRES***  sequence in either orientation, and from the construct
     containing a stem-loop structure at the 5'-end of the  ***IRES***
     sequence. No CP was expressed from a construct containing a stem-loop at
     the 3'-end of the  ***IRES***  sequence. Our results suggest that the
     ***IRES***  sequence is acting in vivo to direct expression of the
     3'-proximal open reading frame in a bicistronic mRNA thereby demonstrating
     the potential of employing  ***IRES***  sequences for the expression of
     foreign proteins from plant virus-based vectors.


 => s l1 and IRES
 L4         4 L1 AND IRES

 => d his

    (FILE 'HOME' ENTERED AT 11:22:42 ON 12 FEB 2003)

    FILE 'BIOSIS, EMBASE, CAPLUS' ENTERED AT 11:23:27 ON 12 FEB 2003
 L1         2179 S POTATO VIRUS X
 L2           4 S L1 AND IRES AND COAT PROTEIN
 L3           2 DUP REM L2 (2 DUPLICATES REMOVED)
 L4           4 S L1 AND IRES

 => s l4 not l2
 L5         0 L4 NOT L2

 => s l1 and vector?
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L6 262 L1 AND VECTOR?

=> s l6 and coat protein
L7 66 L6 AND COAT PROTEIN

=> s l7 and (chimer? or fusion or heterolog)
L8 25 L7 AND (CHIMER? OR FUSION OR HETEROLOG)

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9 16 DUP REM L8 (9 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 16 ANSWERS - CONTINUE? Y/(N):y

L9 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2002:832988 CAPLUS
DN 137:347521
TI Sequences of synthetic nucleic acid molecule for imparting multiple traits and uses for transforming plants
IN Gonsalves, Dennis; Fermin-Munoz, Gustavo Alberto
PA Cornell Research Foundation, Inc., USA
SO PCT Int. Appl., 191 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2002086146 | A2 | 20021031 | WO 2002-US13377 | 20020424 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2001-286075P P 20010424
AB The present invention is directed to a DNA construct which includes a modified DNA mol. with a nucleotide sequence which is at least 80%, but less than 100%, homologous to two or more desired trait DNA mols. and which imparts the desired trait to plants transformed with the DNA construct. Each of the desired trait DNA mols. relative to the modified nucleic acid mol. have nucleotide sequence similarity values which differ by no more than 3 percentage points. The DNA construct may further include either a silencer or a plurality of modified DNA mols. The present invention also relates to host cells, plant cells, transgenic plants, and transgenic plant seeds contg. such DNA constructs. The present invention is also directed to a method of prepg. a modified nucleic acid mol. suitable to impart multiple traits to a plant, a method of detg. whether multiple desired traits can be imparted to plants by a single modified DNA mol., and a method for imparting traits to plants by transforming the plants with the DNA construct.

L9 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2002:391745 CAPLUS
DN 136:400587
TI DNA vaccines encoding ***fusion*** protein of desired antigen and adjuvant sequence of plant viral ***coat*** ***protein***
IN Savelyeva, Natalia; Stevenson, Freda
PA Cancer Research Ventures Limited, UK
SO PCT Int. Appl., 84 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2002040513 | A2 | 20020523 | WO 2001-GB5142 | 20011120 |
| WO 2002040513 | A3 | 20021107 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | | | |
|---|---|---|---|---|
| AU 2002023860 | A5 | 20020527 | AU 2002-23860 | 20011120 |
| PRAI GB 2000-28319 | A | 20001120 | | |
| WO 2001-GB5142 | W | 20011120 | | |

AB A nucleic acid construct is provided for delivery into living cells in vivo for inducing an immune response in a patient to an antigen; the construct directing the expression of a ***fusion*** protein, said ***fusion*** protein comprising said antigen and an adjuvant sequence derived from a plant viral ***coat*** ***protein*** . The plant viral ***coat*** ***protein*** is ***potato*** ***virus*** ***X*** ***coat*** ***protein*** . The antigen is myeloma-specific antigen scFv-5T33, self antigen, tumor antigen, viral antigen derived from e.g. herpes simplex virus or HIV, or bacterial antigen derived from e.g. Staphylococcus or Salmonella. Methods for making such constructs, and methods of using such constructs for the treatment of infectious disease, cancer and B cell malignancy, are provided.

L9 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2002:10231 CAPLUS
DN 136:84679
TI Production of vaccines using transgenic plants or modified plant viruses as expression ***vectors*** and transencapsidated viral coat proteins as epitope presentation systems
IN Hammond, Rosemarie; Zhao, Yan; Hammond, John
PA United States of America, as Represented by the Secretary of Agriculture, USA
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2002000169 | A2 | 20020103 | WO 2001-US20272 | 20010626 |
| WO 2002000169 | A3 | 20020718 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

| | | | | |
|---|---|---|---|---|
| AU 2001070164 | A5 | 20020108 | AU 2001-70164 | 20010626 |
| PRAI US 2000-603997 | A | 20000626 | | |
| WO 2001-US20272 | W | 20010626 | | |

AB Plants infected with potato virus Y (PVY) were inoculated with infectious PVX RNA encoding PVX ***coat*** ***protein*** (CP) and modified ***chimeric*** NDV/BYMV CP. Antigen-coated plate indirect ELISA and immunoelectron microscopy of virus purified from infected plants showed that progeny virions contained from <1 to as much as 25 ***chimeric*** CP. The method can be used to produce and purify large amts. of NDV vaccine. Transencapsidated PVY virions expressing NDV were purified and used to induce anti-NDV antibodies in mice. Further, transgenic tobacco plants expressing HIV/BYMV CP were inoculated with BYMV. Progeny virions from transgenic plants contained transgenic HIV/BYMV CP.

L9 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2001:195215 CAPLUS
DN 134:232724
TI Plant promoters from the cyclophilin genes of Brassica napus and maize and tomato
IN Gasser, Charles Scott; Budelier, Kim Anne; Gunning, Dorian A.
PA USA
SO U.S., 22 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI US 6204373 | B1 | 20010320 | US 1990-517918 | 19900502 |
| PRAI US 1990-517918 | | 19900502 | | |

AB The invention provides plant cyclophilin promoters that direct efficient expression of contiguous structural coding sequences in essentially all plant cells and plant organs of transgenic plants. The promoters are isolated using the cDNA sequences encoding cyclophilin from Brassica napus, maize, and tomato. In addn., ***chimeric*** genes contg. the plant cyclophilin promoters of the invention and ***vectors*** comprising the plant cyclophilin promoters and ***chimeric*** genes of the invention are taught herein.
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2001:573761 CAPLUS
DN 135:271507
TI Plant viral genes in DNA idiotypic vaccines activate linked CD4+ T-cell mediated immunity against B-cell malignancies
AU Savelyeva, Natalia; Munday, Rosalind; Spellerberg, Myfanwy B.; Lomonossoff, George P.; Stevenson, Freda K.
CS Tenovus Laboratory, Southampton University Hospitals Trust, Southampton, SO16 6YD, UK
SO Nature Biotechnology (2001), 19(8), 760-764
CODEN: NABIF9; ISSN: 1087-0156
PB Nature America Inc.
DT Journal
LA English
AB DNA delivery of tumor antigens can activate specific immune attack on cancer cells. However, antigens may be weak, and immune capacity can be compromised. ***Fusion*** of genes encoding activating sequences to the tumor antigen sequence facilitates promotion and manipulation of effector pathways. Idiotypic determinants of B-cell tumors, encoded by the variable region genes, are clone-specific tumor antigens. When assembled as single-chain Fv (scFv) alone in a DNA vaccine, immunogenicity is low. Previously, the authors found that ***fusion*** of a sequence from tetanus toxin (fragment C; FrC) promoted anti-idiotypic protection against lymphoma and myeloma. The authors have now investigated an alternative ***fusion*** gene derived from a plant virus, ***potato*** ***virus*** ***X*** ***coat*** ***protein*** , a primary antigen in humans. When fused to scFv, the self-aggregating protein generates protection against lymphoma and myeloma. In contrast to scFv-FrC, protection against lymphoma is mediated by CD4+ T cells, as is protection against myeloma. Plant viral proteins offer new opportunities to activate immunity against linked T-cell epitopes to attack cancer.
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
AN 2000:398448 BIOSIS
DN PREV200000398448
TI Transgenic or plant expression ***vector*** -mediated recombination of Plum pox virus.
AU Varrelmann, Mark; Palkovics, Laszlo; Maiss, Edgar (1)
CS (1) Institute of Plant Diseases and Plant Protection, University of Hannover, Herrenhaeuser Str. 2, 30419, Hannover Germany
SO Journal of Virology, (August, 2000) Vol. 74, No. 16, pp. 7462-7469. print. ISSN: 0022-538X.
DT Article
LA English
SL English
AB Different mutants of an infectious full-length clone (p35PPV-NAT) of Plum pox virus (PPV) were constructed: three mutants with mutations of the assembly motifs RQ and DF in the ***coat*** ***protein*** gene (CP) and two CP ***chimeras*** with exchanges in the CP core region of Zucchini yellow mosaic virus and Potato virus Y. The assembly mutants were restricted to single infected cells, whereas the PPV ***chimeras*** were able to produce systemic infections in Nicotiana benthamiana plants. After passages in different transgenic N. benthamiana plants expressing the PPV CP gene with a complete (plant line 4.30.45.) or partially deleted 3'-nontranslated region (3'-NTR) (plant line 17.27.4.), characterization

of the viral progeny of all mutants revealed restoration of wild-type virus by recombination with the transgenic CP RNA only in the presence of the complete 3'-NTR (4.30.45.). Reconstitution of wild-type virus was also observed following cobombardment of different assembly-defective p35PPV-NAT together with a movement-defective plant expression ***vector*** of ***Potato*** ***virus*** ***X*** expressing the intact PPV-NAT CP gene transiently in nontransgenic N. benthamiana plants. Finally, a ***chimeric*** recombinant virus was detected after cobombardment of defective p35PPV-NAT with a plant expression ***vector*** -derived CP gene from the sour cherry isolate of PPV (PPV-SoC). This ***chimeric*** virus has been established by a double recombination event between the CP-defective PPV mutant and the intact PPV-SoC CP gene. These results demonstrate that viral sequences can be tested for recombination events without the necessity for producing transgenic plants.

L9 ANSWER 7 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
AN 2000:278084 BIOSIS
DN PREV200000278084
TI Rotavirus VP6 expressed by PVX ***vectors*** in Nicotiana benthamiana coats PVX rods and also assembles into viruslike particles.
AU O'Brien, Graham J.; Bryant, Catherine J.; Voogd, Charlotte; Greenberg, Harry B.; Gardner, Richard C.; Bellamy, A. Richard (1)
CS (1) School of Biological Sciences, University of Auckland, Auckland New Zealand
SO Virology, (May 10, 2000) Vol. 270, No. 2, pp. 444-453. print.
ISSN: 0042-6822.
DT Article
LA English
SL English
AB The rotavirus major inner capsid protein (VP6) has been expressed in Nicotiana benthamiana plants using ***vectors*** based on ***potato*** ***virus*** ***X*** (PVX). VP6 was expressed either as a ***fusion*** with the PVX ***coat*** ***protein*** or from an additional subgenomic promoter inserted to enable both VP6 and PVX ***coat*** ***protein*** to be expressed independently. Both approaches yielded VP6, which retained the ability to form trimers. VP6 expressed from the subgenomic promoter assembled into paracrystalline sheets and tubes. Expression as a ***fusion*** protein yielded PVX rods that presented an external "overcoat" of VP6, but unexpectedly, some rotavirus protein also assembled into icosahedral viruslike particles (VLPs). The assembly of viral protein into VLPs suggests that prior display of VP6 on the flexuous PVX rod facilitates the subsequent assembly of VP6 into stable icosahedral particles.

L9 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1998:605027 CAPLUS
DN 129:198886
TI DNA construct to confer multiple traits on plants
IN Pang, Sheng-zhi; Gonsalves, Dennis; Jan, Fuh-jyh
PA Cornell Research Foundation, Inc., USA
SO PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9837223 | A1 | 19980827 | WO 1998-US3030 | 19980218 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9866571 | A1 | 19980909 | AU 1998-66571 | 19980218 |
| AU 729308 | B2 | 20010201 | | |
| EP 970237 | A1 | 20000112 | EP 1998-908568 | 19980218 |
| R: CH, DE, FR, GB, IT, LI | | | | |
| BR 9807587 | A | 20000321 | BR 1998-7587 | 19980218 |
| US 2002108146 | A1 | 20020808 | US 2001-943215 | 20010830 |
| PRAI US 1997-35350P | P | 19970219 | | |
| US 1997-62870P | P | 19971021 | | |
| US 1998-25635 | A1 | 19980218 | | |
| WO 1998-US3030 | W | 19980218 | | |

AB The present invention is directed to a DNA construct formed from a ***fusion*** gene which includes a trait DNA mol. and a silencer DNA mol. The trait DNA mol. has a length that is insufficient to impart a desired trait to plants transformed with the trait DNA mol. The silencer DNA mol. is operatively coupled to the trait DNA mol. with the trait and silencer DNA mols. collectively having sufficient length to impart the trait to plants transformed with the DNA construct. Expression systems, host cells, plants, and plant seeds contg. the DNA construct are disclosed. The present invention is also directed to imparting multiple traits to a plant, and in particular to prepg. plants which are resistant to multiple viruses. Small nucleocapsid gene fragments (92-235 bp) from tomato spotted wilt virus do not mediate RNA-mediated tospovirus resistance, whereas fusions of the small N gene fragments with jellyfish green fluorescent protein or turnip mosaic virus ***coat*** ***protein*** are shown to induce RNA-mediated tospovirus resistance.
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 9 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 3
AN 1998:262672 BIOSIS
DN PREV199800262672
TI The movement protein of cucumber mosaic virus traffics into sieve elements in minor veins of Nicotiana clevelandii.
AU Blackman, Leila M.; Boevink, Petra; Cruz, Simon Santa; Palukaitis, Peter; Oparka, Karl J. (1)
CS (1) Unit Cell Biol., Dep. Virol., Scottish Crop Res. Inst., Invergowrie, Dundee DD2 5DA UK
SO Plant Cell, (April, 1998) Vol. 10, No. 4, pp. 525-537.
ISSN: 1040-4651.
DT Article
LA English
AB The location of the 3a movement protein (MP) of cucumber mosaic virus (CMV) was studied by quantitative immunogold labeling of the wild-type 3a MP in leaves of Nicotiana clevelandii infected by CMV as well as by using a 3a-green fluorescent protein (GFP) ***fusion*** expressed from a ***potato*** ***virus*** ***X*** (PVX) ***vector*** . Whether expressed from CMV or PVX, the 3a MP targeted plasmodesmata and accumulated in the central cavity of the pore. Within minor veins, the most extensively labeled plasmodesmata were those connecting sieve elements and companion cells. In addition to targeting plasmodesmata, the 3a MP accumulated in the parietal layer of mature sieve elements. Confocal imaging of cells expressing the 3a-GFP ***fusion*** protein showed that the 3a MP assembled into elaborate fibrillar formations in the sieve element parietal layer. The ability of 3a-GFP, expressed from PVX rather than CMV, to enter sieve elements demonstrates that neither the CMV RNA nor the CMV ***coat*** ***protein*** is required for trafficking of the 3a MP into sieve elements. CMV virions were not detected in plasmodesmata from CMV-infected tissue, although large CMV aggregates were often found in the parietal layer of sieve elements and were usually surrounded by 3a MP into sieve elements. CMV virions were not detected in plasmodesmata from CMV-infected tissue, although large CMV aggregates were often found in the parietal layer of sieve elements and were usually surrounded by 3a MP. These data suggest that CMV traffics into minor vein sieve elements as a ribonucleoprotein complex that contains the viral RNA, ***coat*** ***protein*** , and 3a MP, with subsequent viral assembly occurring in the sieve element parietal layer.

L9 ANSWER 10 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4
AN 1999:74113 BIOSIS
DN PREV199900074113
TI Production of a functional single chain antibody attached to the surface of a plant virus.
AU Smolenska, Lisa (1); Roberts, Ian M.; Learmonth, Deanne; Porter, Andrew J.; Harris, William J.; Wilson, T. Michael A.; Santa Cruz, Simon (1)
CS (1) Dep. Virol., Scottish Crop Res. Inst., Invergowrie, Dundee DD2 5DA, UKL
SO FEBS Letters, (Dec. 28, 1998) Vol. 441, No. 3, pp. 379-382.
ISSN: 0014-5793.
DT Article
LA English
AB A ***potato*** ***virus*** ***X*** (PVX) ***vector*** was used to express a single chain antibody fragment (scFv) against the herbicide diuron, as a ***fusion*** to the viral ***coat*** ***protein*** . The modified virus accumulated in inoculated Nicotiana clevelandii plants and assembled to give virus particles carrying the antibody fragment. Electron microscopy was used to show that virus particles from infected leaf sap were specifically trapped on grids coated with a diuron-BSA conjugate. The results demonstrate that the PVX ***vector*** can be used as a presentation system for functional scFv.

L9 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1998:191437 CAPLUS
DN 128:292772
TI Intracellular location of two groundnut rosette umbravirus proteins delivered by PVX and TMV ***vectors***
AU Ryabov, E. V.; Oparka, K. J.; Santa Cruz, S.; Robinson, D. J.; Taliansky, M. E.
CS Virology Dep., Scottish Crop Research Inst., Dundee, DD2 5DA, UK
SO Virology (1998), 242(2), 303-313
CODEN: VIRLAX; ISSN: 0042-6822
PB Academic Press
DT Journal
LA English
AB The proteins encoded by open reading frames (ORF) 3 and 4 of groundnut rosette umbravirus (GRV) were expressed in Nicotiana benthamiana as fusions with green fluorescent protein (GFP) from modified ***potato*** ***virus*** ***X*** (PVX) and tobacco mosaic virus (TMV) ***vectors*** . Regardless of which plant virus ***vector*** was used, GFP fused to the ORF3 protein accumulated in large cytoplasmic inclusion bodies and in nucleoli, whereas GFP fused to the ORF4 protein was found in cell walls close to plasmodesmata. Cell-to-cell movement of PVX requires three proteins encoded by the triple gene block (TGB) and also the ***coat*** ***protein*** (CP). However, when GRV ORF4 was substituted for the PVX CP gene, the hybrid virus was able to move normally in inoculated leaves but not into noninoculated leaves. In contrast, when GRV ORF4 was substituted for the TGB, or for both the TGB and the CP gene, movement of the hybrid viruses was limited to a few epidermal cells neighboring the infection site. Thus, the GRV ORF4 protein can replace the movement proteins of PVX for some of their functions.

L9 ANSWER 12 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 5
AN 1998:165030 BIOSIS
DN PREV199800165030
TI Simultaneous accumulation of multiple viral coat proteins from a TEV-Nla based expression ***vector*** .
AU Ceriani, M. Fernanda; Marcos, Jose F.; Hopp, H. Esteban; Beachy, Roger N. (1)
CS (1) Dep. Cell Biol., Scripps Res. Inst., 10650 North Torrey Pines Rd., CA 92037 USA
SO Plant Molecular Biology, (Jan. 2, 1998) Vol. 36, No. 2, pp. 239-248.
ISSN: 0167-4412.
DT Article
LA English
AB We previously described an expression cassette that relies on the tobacco etch virus (TEV) nuclear inclusion a (Nla) protease and leads to the coordinated accumulation of multiple proteins through self processing of a polyprotein (21). However, low levels of proteins accumulated when the full-length protease was encoded within the polyprotein (22). Studies were conducted to evaluate whether the disruption of Nla nuclear localization would affect the levels of proteins produced via the cassette. Modifications comprised either removal of its nuclear localization signals (NLSs), removal of the VPg domain (which includes the NLSs), and ***fusion*** to the 6 kDa protein, previously demonstrated to be a viral cytoplasmic anchor (28). In in vitro translation reactions and in vivo protoplast experiments the modified Nla retained sequence-specific proteolysis. Moreover, the removal of the NLSs correlated with an increase in GUS reporter accumulation. The modified cassette, pPRO10, led to the synthesis of up to three viral ***coat*** ***protein*** (CPs) in addition to Nla. However, the accumulation of proteins in protoplasts depended upon the position of the CP coding sequence within the cassette as well as on the stability of the protein.

L9 ANSWER 13 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1997:309307 BIOSIS
DN PREV199799617110
TI Restricted virus multiplication in May Queen potato plants transformed with the ***coat*** ***protein*** gene of potato leafroll Luteovirus.
AU Kondo, Toru (1); Matsumura, Takeshi; Tabayashi, Noriko; Yamashita, Naoko (1); Uyeda, Ichiro (1); Hataya, Tatsuji (1); Saruyama, Haruo; Tanida, Masatoshi; Kimura, Ikuo (1); Shikata, Eishiro
CS (1) Dep. Agrobiol. Bioresources, Fac. Agric., Hokkaido Univ., Kita 9, Nishi 9, Kita-Ku, Sapporo 060 Japan
SO Journal of the Faculty of Agriculture Hokkaido University, (1997) Vol. 67, No. 1, pp. 1-13.
ISSN: 0018-344X.
DT Article
LA English
AB Potato plants (cv. May Queen) transformed with two constructs of the ***coat*** ***protein*** (CP) gene of potato leafroll virus (PLRV) were produced and analysed for their susceptibility to PLRV. One construct contained only the PLRV CP gene, while the other contained the ***chimera*** of ***potato*** ***virus*** ***X*** alpha-beta-leader sequence fused to the PLRV CP gene under the control of the cauliflower mosaic virus 35S promoter. CP transcripts were readily detected by Northern analysis, but CP was not detected by the enzyme-linked immunosorbent assay in transgenic plants. One each from the two constructs of transgenic lines showed restricted virus multiplication at the primary (aphid-borne) infection stage. However, at the secondary (tuber-borne) infection stage, restriction was found to be less effective. Based on these results, the restriction of virus multiplication mediated by CP gene appears to be effective when the inoculum dose is as low as that in a case of aphid inoculation.

L9 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1996:369872 CAPLUS
DN 125:27694
TI Manufacture of a protein as a ***fusion*** product with a viral ***coat*** ***protein*** with presentation of the protein on the surface of a rod-shaped virus
IN Chapman, Sean Nicholas; Santa Cruz, Simon Peter; Oparka, Karl John; Wilson, Thomas Michael Aubrey
PA Scottish Crop Research Institute, UK
SO PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9612027 | A1 | 19960425 | WO 1995-GB2457 | 19951018 |
| W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT | | | | |
| RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| CA 2202761 | AA | 19960425 | CA 1995-2202761 | 19951018 |
| AU 9536598 | A1 | 19960506 | AU 1995-36598 | 19951018 |
| AU 702802 | B2 | 19990304 | | |
| EP 787193 | A1 | 19970806 | EP 1995-934228 | 19951018 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, PT, SE | | | | |
| US 6232099 | B1 | 20010515 | US 1997-844045 | 19970418 |
| PRAI GB 1994-20989 | A | 19941018 | | |
| GB 1995-11729 | A | 19950609 | | |
| WO 1995-GB2457 | W | 19951018 | | |

AB A method of manufg. and presenting a protein on the surface of a viral particle is presented. Using a rod-shaped virus the method allows the prodn. of large (i.e. 25 kDa) proteins that assemble with the virus in infected host cells and are arranged on the outer surface of ***chimeric*** viruses. The method is particularly intended for use with rod-shaped plant viruses that are relatively benign, such as ***potato*** ***virus*** ***X*** . ***Potato*** ***virus*** ***X*** has the further advantage of being flexuous and so capable of tolerating fairly large inserts in the ***coat*** ***protein*** . A ***vector*** for the prodn. of biol. useful proteins in such a manner is also disclosed. The prepn. of ***potato*** ***virus*** ***X*** presenting green fluorescent protein on its surface and the use of this virus to demonstrate movement of the virus through the plant is described. The ***fusion*** protein was linked by a peptide cleavable by foot and mouth disease proteinase 2A and the viral construct included an expression cassette for the proteinase gene. Co-expression of the proteinase gene and the ***fusion*** protein gene led to cleavage of some of the ***fusion*** protein and generation of a pool of free ***coat*** ***protein*** to improve the efficiency of formation of the viral coat. Polyprotein processing was essential for the formation of virus capable of systemic propagation through the host plant.

L9 ANSWER 15 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1996:374740 BIOSIS
DN PREV199699097096
TI Assembly and movement of a plant virus carrying a green fluorescent protein overcoat.
AU Cruz, Simon Santa (1); Chapman, Sean; Roberts, Alison G.; Roberts, Ian M.; Prior, Denton A. M.; Oparka, Karl J.
CS (1) Scottish Crop Res. Inst., Invergowrie, Dundee DD2 DA UK
SO Proceedings of the National Academy of Sciences of the United States of America, (1996) Vol. 93, No. 13, pp. 6286-6290.
ISSN: 0027-8424.
DT Article
LA English
AB ***Potato*** ***virus*** ***X*** (PVX) is a filamentous plant virus infecting many members of the family Solanaceae. A modified form of PVX, PVX.GFP-CP which expressed a ***chimeric*** gene encoding a ***fusion*** between the 27-kDa Aequorea victoria green fluorescent protein and the amino terminus of the 25-kDa PVX ***coat*** ***protein*** , assembled into virions and moved both locally and systemically. The PVX.GFP-CP virions were over twice the diameter of wild-type PVX virions. Assembly of PVX.GFP-CP virions required the presence of free ***coat*** ***protein*** subunits in addition to the ***fusion*** protein subunits. PVX.GFP-CP virions accumulated as paracrystalline arrays in infected cells similar to those seen in cells infected with wild-type PVX. The formation of virions carrying large superficial fusions illustrates a novel approach for production of high levels of foreign proteins in plants. Aggregates of PVX.GFP-CP particles were fluorescent, emitting green light when excited with ultraviolet light and could be imaged using confocal laser scanning microscopy. The detection of virus particles in infected tissue demonstrates the potential of fusions between the green fluorescent protein and virus ***coat*** ***protein*** for the non-invasive study of virus multiplication and spread.

L9 ANSWER 16 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 6
AN 1996:123590 BIOSIS
DN PREV199698695725
TI Imaging the green fluorescent protein in plants-viruses carry the torch.
AU Oparka, K. J. (1); Roberts, A. G.; Prior, D. A. M.; Chapman, S.; Baulcombe, D.; Santa Cruz, S.
CS (1) Scottish Crop Research Inst., Invergowrie, Dundee DD2 5DA UK
SO Protoplasma, (1995) Vol. 189, No. 3-4, pp. 133-141.
ISSN: 0033-183X.
DT General Review
LA English
AB The green fluorescent protein (GFP) was introduced into plant cells using ***potato*** ***virus*** ***X*** as a ***vector*** . The GFP was produced at high levels within virus-infected cells by utilising a duplication of the viral ***coat*** ***protein*** subgenomic RNA promoter sequence to direct transcription of mRNA encoding the GFP. We also exploited the ability of GFP to retain its fluorescence when fused to other proteins by fusing it to the PVX ***coat*** ***protein*** . The resultant fluorescent virus became systemic and its movement from cell to cell was traced using confocal laser scanning microscopy. Using PVX as the ***vector*** , additional fusions of the GFP were made to the movement protein of tobacco mosaic virus (TMV). The fluorescent ***fusion*** protein produced was targeted to specific wall sites thought to be plasmodesmatal pit fields. The utility of virus-based ***vectors*** for the delivery and targeting of GFP in living plant cells is discussed.

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|---|---|---|---|
| CA SUBSCRIBER PRICE | | -5.86 | -5.86 |

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| FULL ESTIMATED COST | | 0.21 | 0.21 |

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|---|---|---|---|
| FULL ESTIMATED COST | | 0.21 | 0.21 |

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=> s IRES and viral vector
L1 40 IRES AND VIRAL VECTOR

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2 29 DUP REM L1 (11 DUPLICATES REMOVED)

=> s l2 and py<2001
2 FILES SEARCHED...
L3 14 L2 AND PY<2001

=> d bib abs 1-
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L3 ANSWER 1 OF 14 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2000:179123 BIOSIS
DN PREV200000179123
TI Establishment of efficient reaggregation culture system for gene transfection into immature T cells by retroviral vectors.

AU Hozumi, Katsuto; Ohtsuka, Ryo; Suzuki, Daisuke; Ando, Kiyoshi; Ito, Mamoru; Nishimura, Takashi; Merkenschlager, Matthias; Habu, Sonoko (1)
CS (1) Department of Immunology, Tokai University School of Medicine, Bohseidai, Isehara, 259-1193 Japan
SO Immunology Letters, ( ***Jan. 10, 2000*** ) Vol. 71, No. 1, pp. 61-66. ISSN: 0165-2478.
DT Article
LA English
SL English
AB To overcome low efficiency of retroviral infection into immature T cells, we modified reaggregation fetal thymus organ culture by closely packed co-culture with virus-producing cells (VPC). The ***viral*** ***vector*** was constructed in chimeric vector, pMX, with ***IRES*** and tailless-rat CD2 as a surface marker of infected cells. A rearranged TCR beta gene (Vbeta8.2) was further inserted into the construct for investigating effect of the introduced gene in T cell development. Using this system, we succeeded to transfer the ***viral*** ***vector*** into immature thymocytes at a remarkably higher efficiency compared to conventional methods using medium containing retrovirus. Moreover, the introduced TCR beta gene was expressed on thymocytes of RAG2-deficient mice to induce in the transition of CD4-CD8- double-negative (DN) into CD4+CD8+ double-positive (DP) cells by transducing beta-selection signaling. Thus, our modified reaggregation culture system is useful for studying the molecular mechanism of T cell development due to a highly efficient gene transfer into immature T cells.

L3 ANSWER 2 OF 14 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2000:66467 BIOSIS
DN PREV200000066467
TI Prevention of 6-hydroxydopamine-induced rotational behavior by BDNF somatic gene transfer.
AU Klein, Ronald L. (1); Lewis, Mark H.; Muzyczka, Nicholas; Meyer, Edwin M.
CS (1) Department of Pharmacology and Therapeutics, University of Florida, Gainesville, FL USA
SO Brain Research, ( ***Nov. 20, 1999*** ) Vol. 847, No. 2, pp. 314-320. ISSN: 0006-8993.
DT Article
LA English
SL English
AB Brain-derived neurotrophic factor (BDNF) was expressed via injection of ***viral*** ***vector*** into the substantia nigra pars compacta (SNc) to investigate its influence on nigrostriatal dopaminergic activity and locomotor behavior. The recombinant adeno-associated virus (rAAV) vector, pTR-BDNFmyc, incorporated the neuron-specific enolase (NSE) promoter and the internal ribosome entry site ( ***IRES*** ) element driving expression of both epitope-tagged BDNF and green fluorescent protein (GFP) bicistronically. The control vector, pTR-UF4, incorporated NSE promoter-driven GFP expression only. Transgene expression persisted in both vector groups throughout the 9 month course of the study. Partial 6-hydroxydopamine (6-OHDA) lesions were conducted in the SNc ipsilateral to, and 6 months after, transduction with either the pTR-BDNFmyc or the pTR-UF4. Transgenic BDNFmyc had no effect on the number of tyrosine hydroxylase (TH)-labeled neurons in the SNc after 6-OHDA-lesions, but did block the amphetamine-induced, ipsiversive, turning-behavior caused by the lesion in the pTR-UF4 group. The BDNFmyc-transduced group also demonstrated more locomotor activity and rotational activity contralateral to the lesioned side than did the pTR-UF4-transduced group. Long-term, stable expression of BDNF can therefore modulate locomotor activity without significantly affecting nigrostriatal dopaminergic survival.

L3 ANSWER 3 OF 14 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1999:126783 BIOSIS
DN PREV199900126783
TI Antisense oligonucleotide inhibition of hepatitis C virus (HCV) gene expression in livers of mice infected with an HCV-vaccinia virus recombinant.
AU Zhang, Hong; Hanecak, Ronnie; Brown-Driver, Vickie; Azad, Raana; Conklin, Boyd; Fox, Maureen C.; Anderson, Kevin P. (1)
CS (1) 2292 Faraday Ave., Carlsbad, CA 92008 USA
SO Antimicrobial Agents and Chemotherapy, ( ***Feb., 1999*** ) Vol. 43, No. 2, pp. 347-353. ISSN: 0066-4804.
DT Article
LA English
AB Hepatitis C virus (HCV) is the major cause of non-A, non-B hepatitis worldwide. Current treatments are not curative for most infected individuals, and there is an urgent need for both novel therapeutic agents and small-animal models which can be used to evaluate candidate drugs. A small-animal model of HCV gene expression was developed with recombinant vaccinia virus vectors. VHCV- ***IRES*** (internal ribosome entry site) is a recombinant vaccinia ***viral*** ***vector*** containing the HCV 5' nontranslated region (5'-NTR) and a portion of the HCV core coding region fused to the firefly luciferase gene. Intraperitoneal injection of VHCV- ***IRES*** produced high levels of luciferase activity in the livers of BALB/c mice. Antisense oligonucleotides complementary to the HCV 5'-NTR and translation initiation codon regions were then evaluated for their effects on the expression of these target HCV sequences in BALB/c mice infected with the vaccinia virus vector. Treatment of VHCV- ***IRES*** -infected mice with 20-base phosphorothioate oligonucleotides complementary to the sequence surrounding the HCV initiation codon (nucleotides 330 to 349) specifically reduced luciferase expression in the livers in a dose-dependent manner. Inhibition of HCV reporter gene expression in this small-animal model suggests that antisense oligonucleotides may provide a novel therapy for treatment of chronic HCV infection.

L3 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 2001:480638 CAPLUS
DN 135:87978
TI Mammalian retroviral vectors and their uses in study of gene expression
IN Beach, David H.; Hannon, Gregory J.; Conklin, Douglas; Sun, Peiqing
PA Cold Spring Harbor Laboratory, USA
SO U.S., 60 pp., Cont.-in-part of U.S. 6,025,192. CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI US 6255071 | B1 | 20010703 | US 1997-820931 | 19970319 |
| US 6025192 | A | 20000215 | US 1996-716926 | 19960920 <-- |
| CA 2262476 | AA | 19980326 | CA 1997-2262476 | 19970922 <-- |
| WO 9812339 | A2 | 19980326 | WO 1997-US17579 | 19970922 <-- |
| WO 9812339 | A3 | 19980903 | | |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9746590 | A1 | 19980414 | AU 1997-46590 | 19970922 <-- |
| AU 738156 | B2 | 20010913 | | |
| EP 932695 | A2 | 19990804 | EP 1997-945369 | 19970922 <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2002514054 | T2 | 20020514 | JP 1998-515028 | 19970922 |
| PRAI US 1996-716926 | A2 | 19960920 | | |
| US 1997-820931 | A | 19970319 | | |
| WO 1997-US17579 | W | 19970922 | | |

AB The present invention relates to methods and compns. for the elucidation of mammalian gene function. Expression vectors for animal cells that use regulatory elements of retroviruses to drive expression of cloned genes are described. These vectors are replication-defective and can be used in improved mammalian complementation screening, functional inactivation of specific essential or non-essential mammalian genes, and identification of mammalian genes modulated by specific stimuli. Construction of plasmids for the manuf. of a no. of such vectors is described. In particular, the compns. of the present invention include, but are not limited to, replication-deficient retroviral vectors, libraries comprising such vectors, retroviral particles produced by such vectors in conjunction with retroviral packaging cell lines, integrated provirus sequences derived from the retroviral particles of the invention and circularized provirus sequences which have been excised from the integrated provirus sequences of the invention. The compns. of the present invention further include novel retroviral packaging cell lines.
RE.CNT 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 2000:861527 CAPLUS
DN 134:26054
TI A novel packaging cell line for the rescue, production and titration of high-capacity adenovirus vectors
IN Krougliak, Valeri A.; Eisensmith, Randy C.
PA Mount Sinai School of Medicine, USA
SO PCT Int. Appl., 53 pp. CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2000072887 | A1 | 20001207 | WO 2000-US14914 | 20000526 <-- |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| PRAI US 1999-136481P | P | 19990528 | | |

AB The present invention describes a method of producing adenovirus gutless amplicon ***viral*** ***vector*** substantially reduced in the content of helper virus. The invention also describes a system for the helper virus independent replication and packaging of adenovirus gutless vectors. The method avoids the problem by placing helper functions on an episome based on an Epstein-Barr virus replicon that is stable at a low copy no but that lacks the encapsidation signal and the terminal protein gene. The helper functions are under control of a regulated promoter. Viral replication is induced when the cells are transformed with a vector carrying the terminal protein gene. A cell line for this system is also discussed.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 2000:209936 CAPLUS
DN 132:246355
TI Methods using .beta.-endorphin-expressing recombinant expression systems for treating chronic pain
IN Iadarola, Michael J.; Caudle, Robert M.; Finegold, Alan A.; Mannes, Andrew J.; Olah, Zoltan
PA Government of the United States of America, Represented by the Secretary, Department of Health and Human Services, USA
SO PCT Int. Appl., 49 pp. CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2000016800 | A2 | 20000330 | WO 1999-US22103 | 19990923 <-- |
| WO 2000016800 | A3 | 20000720 | | |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 9962609 | A1 | 20000410 | AU 1999-62609 | 19990923 <-- |
| PRAI US 1998-100901P | P | 19980923 | | |
| WO 1999-US22103 | W | 19990923 | | |

AB Compns. and methods are provided which selectively treat chronic pain while not significantly affecting basal nociceptive, acute pain responses. The invention provides for compns. and methods of treating chronic pain by administering .beta.-endorphin-expressing recombinant expression systems, e.g. adenovirus or adeno-assocd. virus, into a subarachnoid or epidural

space. The recombinant virus infects the pia mater connective tissue cells and the infected cells express the fusion protein, wherein the fusion protein is secreted into the spinal cord parenchymal tissue in an amt. effective to treat the chronic pain but not significantly affecting basal nociceptive responses.

L3 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 2000:20 CAPLUS
DN 132:32667
TI Cloning of Escherichia coli cytosine deaminase gene and expression of the gene using a new ***viral*** ***vector***
IN Gu, Jianren; Ren, Shengjun; Xu, Xiulan
PA Shanghai Tumour Research Institute, Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 39 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI CN 1161375 | A | 19971008 | CN 1996-116598 | 19961129 <-- |
| CN 1055968 | B | 20000830 | | |
| PRAI CN 1996-116598 | | 19961129 | | |

AB The gene encoding cytosine deaminase of Escherichia coli strain H-30 was cloned, and its initiation codon of 'GTG' was mutated to 'ATG' by PCR. Prepn. of prokaryotic recombinant expression vector pBV220-CD; prepn. of packaging cells for producing infectious pseudo-retrovirus or pseudo-adenovirus vectors; and use of the pseudo-virus for treating cancer along with 5-FC (5-fluorocytosine), which induces lethal toxicity to the cells contg. active CD gene, are also described.

L3 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1999:439294 CAPLUS
DN 131:69280
TI Novel gene trap and its use for high efficiency selection of regulated eukaryotic genes
IN Baetscher, Manfred; Nir, Waan-jeng
PA Biotransplant, Inc., USA
SO U.S., 23 pp., Cont. of U.S. Ser. No. 374,833, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI US 5922601 | A | 19990713 | US 1996-716854 | 19960916 <-- |
| PRAI US 1995-374833 | | 19950119 | | |

AB The invention provides a novel gene trap construct that allows for high efficiency identification and selection of eukaryotic genes whose activity is regulated upon a cellular transition. Said ***viral*** ***vector*** comprises in its downstream sequence (i) a cassette having a functional splice acceptor, a translation stop sequence and an internal ribosome entry site and (ii) a promoterless protein coding sequence encoding at least one polypeptide providing pos. and neg. selection traits. Also provided is a method for identification of genes whose activity is regulated upon a cellular transition event by introducing the gene trap construct into a cell and observing expression of the pos. and/or neg. selection traits before and after the transition event.
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1999:194259 CAPLUS
DN 130:233258
TI ***Viral*** ***vector*** system capable of expressing an apoptosis-associated gene
IN Hamada, Hirofumi
PA RPR Gencell Asia/Pacific Inc., Japan
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9913073 | A2 | 19990318 | WO 1998-JP4010 | 19980907 <-- |
| WO 9913073 | A3 | 19990610 | | |
| W: AU, CA, KR, NZ, US | | | | |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| JP 11075859 | A2 | 19990323 | JP 1997-259235 | 19970908 <-- |
| AU 9889991 | A1 | 19990329 | AU 1998-89991 | 19980907 <-- |
| PRAI JP 1997-259235 | | 19970908 | | |
| WO 1998-JP4010 | | 19980907 | | |

AB An apoptosis-resistant virus-sensitive cell line based upon cell line 293 is disclosed. To such cells, apoptosis resistance genes such as crmA, bcl-2, bcl-x1, FLIP, survivin, IAP, or ILP have been introduced. The generation of adenovirus vectors capable of expressing apoptosis-assocd. genes such as FAS, FLICE, bcl-xs, and Bax is achieved using said cell line. The recombinant viruses of the invention may be useful for gene therapy for cancer, autoimmune diseases, graft rejection, and inflammatory diseases.

L3 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1998:395891 CAPLUS
DN 129:131842
TI In vivo expression of therapeutic human genes for dopamine production in the caudates of MPTP-treated monkeys using an AAV vector
AU During, M. J.; Samulski, R. J.; Elsworth, J. D.; Kaplitt, M. G.; Leone, P.; Xiao, X.; Li, J.; Freese, A.; Taylor, J. R.; Roth, R. H.; Sladek, J. R., Jr.; O'malley, K. L.; Redmond, D. E., Jr.
CS Department of Molecular Medicine, University of Auckland School of Medicine, Auckland, N. Z.
SO Gene Therapy ( ***1998*** ), 5(6), 820-827
CODEN: GETHEC; ISSN: 0969-7128
PB Stockton Press
DT Journal
LA English
AB An adeno-assocd. virus (AAV) vector, expressing genes for human tyrosine hydroxylase (TH) and arom. amino acid decarboxylase (AADC), demonstrated significantly increased prodn. of dopamine in 293 (human embryonic kidney) cells. This bicistronic vector was used to transduce striatal cells of six asymptomatic but dopamine-depleted monkeys which had been treated with the neurotoxin MPTP. Striatal cells were immunoreactive for the vector-encoded TH after stereotactic injection for periods up to 134 days, with biochem. effects consistent with dopamine biosynthetic enzyme expression. A subsequent expt. was carried out in six more severely depleted and parkinsonian monkeys. Several TH/aadc-treated monkeys showed elevated levels of dopamine near injection tracts after 2.5 mo. Two monkeys that received a .beta.-galactosidase expressing vector showed no change in striatal dopamine. Behavioral changes could not be statistically related to the vector treatment groups. Toxicity was limited to transient fever in several animals and severe hyperactivity in one animal in the first days after injection with no assocd. histol. evidence of inflammation. This study shows the successful transfection of primate neurons over a period up to 2.5 mo with suggestive evidence of biochem. phenotypic effects and without significant toxicity. While supporting the idea of an in vivo gene therapy for Parkinson's disease, more consistent and longer lasting biochem. and behavioral effects will be necessary to establish the feasibility of this approach in a primate model of parkinsonism.
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1998:89371 CAPLUS
DN 128:150403
TI Construction of retroviral vectors for delivering viral and oncogenic inhibitors
IN Raybak, Susanna M.; Cara, Andrea; Gusella, Gabriele Luca; Newton, Dianne L.
PA United States Dept. of Health and Human Services, USA; Raybak, Susanna M.; Cara, Andrea; Gusella, Gabriele Luca; Newton, Dianne L.
SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9803669 | A2 | 19980129 | WO 1997-US12637 | 19970717 <-- |
| WO 9803669 | A3 | 19980226 | | |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9738049 | A1 | 19980210 | AU 1997-38049 | 19970717 <-- |
| AU 734968 | B2 | 20010628 | | |
| EP 917585 | A2 | 19990526 | EP 1997-935014 | 19970717 <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| PRAI US 1996-22052P | P | 19960722 | | |
| WO 1997-US12637 | W | 19970717 | | |

AB Cell transformation vectors for inhibiting HIV and tumor growth are provided. Optionally, the vectors encode RNAses A superfamily members such as eosinophil-derived neurotoxin (EDN) and onconase. Cells transduced by the vectors and methods of transforming cells (in vitro and in vivo) using the vectors are also provided. The viral and oncogene inhibitors are typically linked to a promoter such as retroviral HIV LTR promoters, the CMV promoter, the probasin promoter, and tetracycline-responsive promoters. The method is exemplified by construction of a ***viral*** ***vector*** contg. a HIV Rev-responsive element, an encephalomycocarditis virus internal ribosome entry site, a first viral inhibitor subsequence (for immunodominant proteins such as as Tat, Gag, or Rev), splice donor site subsequence, splice acceptor site subsequence, the above mentioned promoter, and the EDN coding sequence. The vector may be packaged in a liposome and its contents transduced into CD34+ hematopoietic stem cells, CD4+ cells, and transferrin receptor+ cells. Claimed vectors include pBAR, pBAR-ONC, and pBAR-EDN.

L3 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1998:15859 CAPLUS
DN 128:85136
TI Construction of adenoviral gene vectors for mammalian cells
IN Perricaudet, Michel; Yeh, Patrice; Leblois-Prehaud, Helene
PA Rhone-Poulenc Rorer S.A., Fr.; Perricaudet, Michel; Yeh, Patrice; Leblois-Prehaud, Helene
SO PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DT Patent
LA French
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9747757 | A1 | 19971218 | WO 1997-FR914 | 19970523 <-- |
| W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GH, HU, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| FR 2749857 | A1 | 19971219 | FR 1996-7273 | 19960612 <-- |
| FR 2749857 | B1 | 19980814 | | |
| CA 2257916 | AA | 19971218 | CA 1997-2257916 | 19970523 <-- |
| AU 9730377 | A1 | 19980107 | AU 1997-30377 | 19970523 <-- |
| AU 726442 | B2 | 20001109 | | |
| EP 906443 | A1 | 19990407 | EP 1997-925133 | 19970523 <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, FI | | | | |
| BR 9709700 | A | 19990810 | BR 1997-9700 | 19970523 <-- |
| JP 2000511779 | T2 | 20000912 | JP 1998-501269 | 19970523 <-- |
| NO 9805739 | A | 19981208 | NO 1998-5739 | 19981208 <-- |
| KR 2000016524 | A | 20000325 | KR 1998-710112 | 19981210 <-- |
| PRAI FR 1996-7273 | A | 19960612 | | |
| WO 1997-FR914 | W | 19970523 | | |

AB The invention discloses circular and replicating DNA mols., useful in gene therapy, as well as a particularly efficient method for generating them in situ from a mutant adenovirus-derived vector. The adenovirus carries a

deletion mutation in the E1 gene. The DNA sequences carried by the adenoviral vectors are a gene of interest, replication origins from viruses such as the Epstein-Barr virus (EBV) and papillomavirus, ARS sequences, and an inducible promoter controlling the Cre recombinase gene. The promoter is derived from mouse mammary tumor virus and is inducible by dexamethason or tetracycline. The viral replication origin regions are dependent on site-specific recombination. The viral vectors also contain inverted repeat sequences from the P1 phage loxP region which are responsive to Cre recombinase. The method is exemplified by constructing a ***viral*** ***vector*** contg. the EBV EBNA1 gene and oriP region, a mammalian cell-functional gene promoter, and the ***IRES*** genetic element from encephalomyocarditis virus.

L3 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1998:567287 CAPLUS
DN 125:187592
TI RNA virus vector and helper virus or cell line for gene cloning, vaccine development, and neoplasm and inflammation inhibitor recombinant production
IN Mertelsmann, Roland; Rosenthal, Felicia; Kalden, Joachim; Bertling, Wolf; Lindemann, Albrecht; Kulmburg, Peter; Veelken, Hendrik
PA Klinikum der Albert-Ludwigs-Universitaet Freiburg, Germany
SO Ger. Offen., 11 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI DE 19503082 | A1 | 19960808 | DE 1995-19503082 | 19950201 <-- |
| WO 9623889 | A1 | 19960808 | WO 1996-EP334 | 19960129 <-- |
| W: AU, BR, CA, CN, JP, KR, RU, US | | | | |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| AU 9652598 | A1 | 19960821 | AU 1996-52598 | 19960129 <-- |
| EP 804598 | A1 | 19971105 | EP 1996-900980 | 19960129 <-- |
| R: AT, BE, CH, DE, FR, GB, IT, LI, NL | | | | |
| US 6255104 | B1 | 20010703 | US 1998-894170 | 19980512 |

PRAI DE 1995-19503082 A 19950201
WO 1996-EP334 W 19960129
AB RNA virus vectors in conjunction with helper viruses or helper cell lines are useful for gene cloning. Recombinant neoplasm inhibitors and inflammation inhibitors can be producted by this method. Vaccine development is another application. An example is poliovirus interleukin-2 gene expression in tumor treatment. The EMC ***IRES*** element was used in the poliovirus vector. Another example is human gene fas expression using a ***viral*** ***vector*** to induce cell type-specific apoptosis.

L3 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1993:206917 CAPLUS
DN 118:206917
TI Characterization of a bicistronic retroviral vector composed of the swine vesicular disease virus internal ribosome entry site
AU Chen, Bing Fang; Hwang, Lih Hwa; Chen, Ding Shinn
CS Coll. Med., Natl. Taiwan Univ., Taipei, Taiwan
SO Journal of Virology ( ***1993*** ), 67(4), 2142-8
CODEN: JOVIAM; ISSN: 0022-538X
DT Journal
LA English
AB The 5' nontranslated region (NTR) from the genome of swine vesicular disease virus (SVDV), a member of the family Picornaviridae, was cloned and used to construct a bicistronic retroviral vector. The vector is characterized by coexpression of 2 genes from a single transcript. Inclusion of the 5' NTR of SVDV did not negate the ***viral*** ***vector*** titer. Protein anal. indicated that the 5' NTR could efficiently direct internal initiation, thus allowing the downstream gene to be translated. Translation of the internally initiated porcine growth hormone gene was .apprx.30-fold less than that when the porcine growth hormone gene was at the upstream position in NIH 3T3 cells but was about equiv. to that in HeLa cells, implying that some cellular factors that stimulated internal initiation of the SVDV 5' NTR are present in HeLa cells. However, in G418-selected clones, the Neor-encoding gene was expressed with equiv. efficiency either at a downstream position or at an' upstream position in either NIH 3T3 or HeLa cells. Compared with the conventional double-gene vector or the U3-based vector, the bicistronic vector coexpressed 2 genes much more efficiently, owing to elimination or promoter interference. Furthermore, this type of vector infected and expressed the target genes efficiently in 2 primary cell lines, rat embryo and human skin fibroblast cells, that were tested. These exptl. data suggest a better design for the retroviral vector and provide evidence that internal initiation of the SVDV 5' NTR was stimulated cell-specifically.

=> d his

(FILE 'HOME' ENTERED AT 17:17:50 ON 20 FEB 2003)

FILE 'BIOSIS, EMBASE, CAPLUS' ENTERED AT 17:18:32 ON 20 FEB 2003
L1 40 S IRES AND VIRAL VECTOR
L2 29 DUP REM L1 (11 DUPLICATES REMOVED)
L3 14 S L2 AND PY<2001

=> s IRES and retrovir?
L4 505 IRES AND RETROVIR?

=> s l4 and py<2001
1 FILES SEARCHED...
L5 324 L4 AND PY<2001

=> d bib abs 1-10

L5 ANSWER 1 OF 324 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2002:425400 BIOSIS
DN PREV200200425400
TI Rous sarcoma virus translation revisited: Characterization of an internal ribosome entry segment in the 5' leader of the genomic RNA.
AU Deffaud, Clarence; Darlix, Jean-Luc (1)
CS (1) LaboRetro, Unite de Virologie Humaine, Institut National de la Sante et de la Recherche Medicale, Ecole Normale Superieure de Lyon, 46 Allee d' Italie, No. 412, 69364, Lyon Cedex 07: Jean-Luc.Darlix@ens-lyon.fr France
SO Journal of Virology, ( ***December, 2000*** ) Vol. 74, No. 24, pp. 11581-11588. http://jvi.asm.org/. print.
ISSN: 0022-538X.
DT Article
LA English
AB The 5' leader of Rous sarcoma virus (RSV) genomic RNA and of ***retroviruses*** in general is long and contains stable secondary structures that are critical in the early and late steps of virus replication such as RNA dimerization and packaging and in the process of reverse transcription. The initiation of RSV Gag translation has been reported to be 5' cap dependent and controlled by three short open reading frames located in the 380-nucleotide leader upstream of the Gag start codon. Translation of RSV Gag would thus differ from that prevailing in other ***retroviruses*** such as murine leukemia virus, reticuloendotheliosis virus type A, and simian immunodeficiency virus, in which an internal ribosome entry segment ( ***IRES*** ) in the 5' end of the genomic RNA directs efficient Gag expression despite stable 5' secondary structures. This prompted us to investigate whether RSV Gag translation might be controlled by an ***IRES*** -dependent mechanism. The results show that the 5' leaders of RSV and v-Src RNA exhibit ***IRES*** properties, since these viral elements can promote efficient translation of monocistronic RNAs in conditions inhibiting 5' cap-dependent translation. When inserted between two cistrons in a canonical bicistronic construct, both the RSV and v-Src leaders promote expression of the 3' cistron. A genetic analysis of the RSV leader allowed the identification of two nonoverlapping 5' and 3' leader domains with ***IRES*** activity. In addition, the v-Src leader was found to contain unique 3' sequences promoting an efficient reinitiation of translation. Taken together, these data lead us to propose a new model for RSV translation.

L5 ANSWER 2 OF 324 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2001:322188 BIOSIS
DN PREV200100322188
TI Restoration of WASP-deficient T-cell signaling defects in mice upon transplantation of ***retrovirally*** transduced hematopoietic stem cells.
AU Klein, Christoph (1); Nguyen, Deanna; Liu, Ching-Hui; Rosen, Fred S.; Alt, Fred W.; Mulligan, Richard C.; Snapper, Scott B.
CS (1) Pediatric Hematology/Oncology, Medical School Hannover, Hannover Germany
SO Blood, ( ***November 16, 2000*** ) Vol. 96, No. 11 Part 1, pp. 591a. print.
Meeting Info.: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000 American Society of Hematology
. ISSN: 0006-4971.
DT Conference
LA English
SL English
AB Wiskott Aldrich Syndrome, an X-linked primary immunodeficiency disorder, is caused by mutations in the WASP gene. WASP plays a critical role in antigen-receptor signaling in T-cells by regulating cell surface signals to the cytoskeleton. In both patients and in WASP KO mice, WASP-deficient T cells do not proliferate and have cytoskeletal defects in response to CD3 crosslinking. In this study, we have used a WASP knockout mouse model to assess whether transplantation of ***retrovirally*** transduced hematopoietic stem cells would reverse the specific T-cell signaling deficiency. First, we asked the question whether WASP-expressing cells might have a selective advantage over WASP-deficient cells. Competitive repopulation experiments were performed in RAG2-deficient mice, since WASP-deficient animals showed a high penetrance of irradiation-induced colitis, preventing their use as recipient mice. Using Southern blot analysis, we documented a selective advantage of wild-type cells in peripheral lymph nodes and spleen, whereas no obvious selective advantage was seen in bone marrow. This finding supports the concept that even the transplantation of a low number of transduced stem cells may lead to therapeutic benefit. In a second series of experiments, we evaluated the feasibility of ***retroviral*** gene transfer into WASP-deficient hematopoietic stem cells. Murine scal+lin-HSC from WASP-/- mice were transduced with VSV-G pseudotyped recombinant ***retroviruses*** encoding WASP and the marker gene GFP. Upon transplantation of genetically modified stem cells, recipient mice developed a phenotypically normal immune system. Peripheral T-cells showed expression of WASP, as documented by Western blot analysis. Functionally, the specific proliferative defect of WASP-/-T-cells was significantly improved: T-cells from mice transplanted with WASP-deficient stem cells transduced with CMMP-WASP-***IRES*** -GFP showed up to 50% of CD3-induced proliferation levels compared to T-cells from control mice transplanted with wildtype stem cells transduced with the control virus CMMP-GFP. Furthermore, ***retrovirus*** -mediated expression of WASP also protected significantly against the onset of colitis in recipient mice. These results provide proof of principle that WASP deficiency can be reversed upon transplantation of ***retrovirally*** transduced HSC and may encourage clinical gene therapy trials.

L5 ANSWER 3 OF 324 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2001:317213 BIOSIS
DN PREV200100317213
TI Protection of mice from methotrexate and cyclophosphamide induced myelotoxicity by human aldehyde-dehydrogenase and mutated dihydrofolate reductase cDNA gene transfer.
AU Takebe, Naoko (1); Zhao, Shi-Cheng; Banerjee, Debabrata; Bertino, Joseph R.
CS (1) Medicine, University of Maryland, Baltimore, MD USA
SO Blood, ( ***November 16, 2000*** ) Vol. 96, No. 11 Part 1, pp. 799a. print.
Meeting Info.: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000 American Society of Hematology
. ISSN: 0006-4971.
DT Conference
LA English
SL English
AB The genetic transfer of drug-resistance to hematopoietic cells is an attractive approach to overcome myelosuppression caused by high dose chemotherapy. Because cyclophosphamide (CTX) and methotrexate (MTX) are commonly used non-cross resistant drugs, generation of dual drug-resistance in hematopoietic cells may allow an increase in dose intensity. We have previously reported in vitro mouse bone marrow progenitor cell protection from 4-hydroxycyclophosphamide (4HC) and methotrexate (MTX) by ***retroviral*** gene transfer of human cytosolic class-1 aldehyde-dehydrogenase (ALDH-1) cDNA and a mutated human

dihydrofolate reductase (DHFR; Phe22/Ser31=F/S) gene transfer using SFG based bicistronic MoMLV ***retroviral*** vector, SGF-ALDH- ***IRES*** -F/S (Takebe N. et al. Blood abstract 554a, 1997). Lethally irradiated mice transplanted with gpAM12-SFG-ALDH- ***IRES*** -F/S or mock transduced bone marrow cells were treated with high dose pulse cyclophosphamide (CTX), 200mg/kg daily X 3 or high dose CTX/MTX, 150 mg/kg and 300mg/kg weekly X 2. Animals receiving mock transduced marrow died from CTX and MTX toxicity, whereas mice transplanted with ALDH-1 and mutated DHFR cDNA containing marrow were able to tolerate pulse CTX or weekly CTX/MTX treatment post-transplant. Mice transplanted with transduced marrow and treated with high dose MTX/CTX or high dose CTX alone showed peripheral blood count recovery and maintained their weight, while control mice did not show any blood count recovery and developed weight loss. Genomic DNA from day 11 CFU-S and bone marrow showed evidence of human ALDH-1 cDNA integration by PCR. These data indicate that overexpression of ALDH-1 and mutated DHFR sufficiently induced both 4HC/CTX and MTX resistance in the in vivo mouse model and points to the potential usefulness of this construct to protect patients, requiring high dose CTX and MTX, from myelosuppression.

L5 ANSWER 4 OF 324 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2001:313997 BIOSIS
DN PREV200100313997
TI Sustained and high level transgene expression in human hematopoietic stem cells transduced by an MSCV/HIV hybrid lentiviral vector.
AU Gao, Zhigang (1); Golob, Jonathan (1); Hawley, Robert G.; Tanavde, Vivek M. (1); Civin, Curt I. (1); Cheng, Linzhao (1)
CS (1) Johns Hopkins Oncology Center, Baltimore, MD USA
SO Blood, ( ***November 16, 2000*** ) Vol. 96, No. 11 Part 1, pp. 429a. print.
Meeting Info.: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000 American Society of Hematology
. ISSN: 0006-4971.
DT Conference
LA English
SL English
AB Oncoretroviral vectors have been used extensively in attempts to transduce human hematopoietic stem-progenitor cells (HSC). We and others have reported that murine stem cell virus (MSCV)-based oncoretroviral vectors transduced HSC efficiently. Lentiviral vectors based on human HIV-1 have been developed recently to transduce HSC. Although high-titer HIV-1 derived vectors have been produced, concerns exist regarding the stability and level of transgene expression that can be achieved following transduction of human HSC. We therefore constructed novel lentivirus vectors which are based on HIV-1 and MSCV. In this study, we present the results obtained with one of the hybrid vectors, pHR'-GIN-MU3, in which the U3 region of the HIV LTR was replaced by the U3 region of the MSCV LTR (MU3). For comparison, we also used an oncoretroviral vector, MGIN, containing an identical reporter gene cassette (GFP- ***IRES*** -NeoR) controlled by the MSCV LTR. Both vectors directed efficient transgene expression in various human cell lines, indicating that the MU3 enhancer/promoter functioned in the context of the lentiviral backbone. Human cord blood CD34+ cells that had been cultured for 24 hrs in the presence of thrombopoietin, Kit ligand and Flt-3 ligand were transduced twice over 48 hrs with either vector at similar MOI by the spinoculation procedure. FACS analyses and in vitro CFC assays showed that CD34+ cells were transduced by the oncoretroviral and the lentiviral vector at a similar level. To examine transgene expression in the in vivo progeny of transduced human CD34+ cells, the NOD/SCID-transplant assay was used. We observed that 21-40% of the human cells in the bone marrow of NOD/SCID mice expressed the GFP gene introduced by the pHR'-GIN-MU3 vector, up to 4 months after transplant. High level GFP expression was observed in both lymphoid, erythroid and myeloid cells. In contrast, low percentages of engrafted human cells expressed GFP from the MGIN vector, presumably because the transduction conditions used were suboptimal for oncoretroviral vectors. Lentiviral vectors such as this MSCV/HIV hybrid vector provide a basis for the design of improved delivery vehicles for gene transfer and expression in human HSC.

L5 ANSWER 5 OF 324 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2001:313287 BIOSIS
DN PREV200100313287
TI ***Retrovirus*** -mediated expression of the base excision repair protein, FPG, protects hematopoietic cells from thiotepa-induced toxicity in vivo.
AU Kobune, M. (1); Xu, Y. (1); Baum, C.; Kelley, M. R. (1); Williams, D. A.
CS (1) Pediatrics, Indiana University School of Medicine, Indianapolis, IN USA
SO Blood, ( ***November 16, 2000*** ) Vol. 96, No. 11 Part 1, pp. 461a. print.
Meeting Info.: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000 American Society of Hematology
. ISSN: 0006-4971.
DT Conference
LA English
SL English
AB Modulation of DNA damage repair activity could lead to new approaches to reduce cytotoxic side effects of chemotherapy. ThioTEPA (TT) induces the formation of N7-aminoethyl (AE) guanine and N7-AE adenine adducts resulting in imidazole ring opening (formamidopyrimidine; Fapy) and is associated with significant myelosuppression in dose-intensive therapies. In E. coli, Fapy lesions are repaired by the Fapy-DNA glycosylase (Fpg) protein. We hypothesized that expression of the Fpg could increase resistance of hematopoietic cells to TT. Fpg-transduced K562 cells demonstrated increased 8-oxodG DNA glycosylase activity and transduced BM progenitor cells were resistant in vitro to TT at multiple concentrations. A ***retrovirus*** containing Fpg- ***IRES*** -EGFP in a pSF91 backbone (Fpg group; FPG) or the backbone containing ***IRES*** -EGFP alone (control group; CN) was used to transduce BM for in vivo analysis. Transduction efficiency was 30-50% and 4-7% (CN and FPG, respectively). Transduced BM cells were transplanted into C57B1/6J mice that were then treated with cycles of 10 mg/kg of TT given (X2) one week apart. In spite of the low transduction efficiency of the FPG vector, peripheral blood leukocytes, hemoglobin and platelet counts of TT-treated FPG mice were significantly higher than CN mice. Platelet counts were well-protected at nadir (238+/-142 X 103/mul vs 100+/-113 X 103/mul, FPG vs CN, p<0.05). After 2 cycles of TT treatment, the numbers of EGFP+ progenitor cells in BM of treated FPG mice were significantly higher compared with those of CN mice, in spite of the initial transduction efficiency (387+/-86.9 vs 112+/-121 X 105 cells, p<0.05). Splenic and thymic cellularity of FPG mice were also significantly higher (spleen 86.9+/-18.9 X 106 vs 31.1+/-9.5 X 106, p<0.01; thymus 9.5+/-5.9 X 105 vs 1.5+/- 1.0 X 106, FPG vs CN, respectively, p<0.05). Selective pressure was also demonstrated by an increase in the proportion of EGFP "bright" cells after TT. Mean fluorescence intensity (MFI) of peripheral mononuclear cells (PBMC) of FPG group was increased after 1 cycle of TT treatment compared with pretreatment MFI (1052+/-747 vs 523+/-205, p<0.05), while the MFI of CN and non-treated FPG mice were not changed. These results show that expression of the Fpg protein protects hematopoietic cells from TT-induced DNA damage and BM cells highly expressing bacterial Fpg selectively survive during TT in vivo treatment. Fpg may provide a novel approach to preventing TT-induced toxicity of primary hematopoietic cells.

L5 ANSWER 6 OF 324 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2001:311927 BIOSIS
DN PREV200100311927
TI Myeloma cells homing to the bone marrow is directed by CXCR4/SDF-1 interactions.
AU Woodliff, Jeffrey E. (1); Engel, Barbara C.; Epstein, Joshua (1)
CS (1) Myeloma and Transplantation Research Center, University of Arkansas for Medical Sciences, Little Rock, AR USA
SO Blood, ( ***November 16, 2000*** ) Vol. 96, No. 11 Part 1, pp. 550a. print.
Meeting Info.: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000 American Society of Hematology
. ISSN: 0006-4971.
DT Conference
LA English
SL English
AB Multiple Myeloma is characterized by malignant plasma cell infiltration throughout the bone marrow, resulting in lytic bone lesions, a devastating manifestation of this disease. The mechanism controlling myeloma cells homing to the bone marrow have not been elucidated. We have previously reported that primary myeloma cells express the chemokine receptor CXCR4 and migrate in vitro in response to its ligand SDF-1. To further determine whether this mechanism is responsible for active myeloma cell homing to the bone marrow in vivo, we investigated the dissemination of myeloma cells engineered to differentially express CXCR4 in SCID mice. ARP-1 cells, a cell line established from the bone marrow of a myeloma patient, express low levels of CXCR4. ARP-1 cells were transfected with CXCR4 to generate stable transfectants (Arp-1X), with constitutive expression 20 fold higher than that of parental cells. To reduce endogenous expression and to minimize the effect of in vivo induction of CXCR4 expression seen in preliminary experiments, Arp-1 cells were also transduced with the ***retroviral*** SDF-1 intrakine vector MND-SDF-KDEL ***IRES*** -eGFP (MSKIE). SCID mice were inoculated intravenously with Arp-1X or Arp-1neo/MSKIE cells. When tumor developed, the presence of tumor cells in the different organs was determined using CD38/CD45 (for ARP-1X) or GFP flow cytometry (for Arp-1neo/MSKIE). All mice injected with Arp-1X cells had tumor cells in their femurs (11.9%+-2.1) and in their vertebrae (25.3%+-28.7). In contrast, only two of the 5 mice injected with Arp-1neo/MSKIE cells had tumor cells in the femur (0.08% and 0.01%), one of these also had 0.1% tumor cells in its vertebrae. The difference between the two groups in bone marrow plasmacytosis was statistically significant (p=0.02). These results demonstrate unequivocally that CXCR4 directs active migration of myeloma cell towards the bone marrow.

L5 ANSWER 7 OF 324 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2001:311903 BIOSIS
DN PREV200100311903
TI BCR-ABL induces normal erythropoiesis in the absence of JAK2.
AU Ghaffari, Saghi (1); Kitidis, Claire (1); Neubauer, Hans; Pfeffer, Klaus; Lodish, Harvey (1)
CS (1) Whitehead Institute, Cambridge, MA USA
SO Blood, ( ***November 16, 2000*** ) Vol. 96, No. 11 Part 1, pp. 538a. print.
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. ISSN: 0006-4971.
DT Article; Conference
LA English
SL English
AB We have shown previously that the constitutively active tyrosine kinase BCR-ABL oncoprotein (P210) induces red cell formation in EpoR-/- fetal liver cells (FLC). JAK2 is an integral component of EpoR where it initiates the stimulation of downstream signaling pathways. JAK2 function is crucial for definitive erythropoiesis, as JAK2-deficient mice die from fetal anemia by embryonic day 12 or 13, similar to EpoR-/- mice; however, JAK2-/- embryos suffer from a more severe defect. We have found JAK2 to be constitutively phosphorylated in the erythroleukemic HCD57 cell line expressing P210.JAK2 phosphorylation is increased significantly upon Epo stimulation in HCDP210 cells as compared to the parental HCD57 cells. We find JAK2 to be also constitutively phosphorylated in primary FLC ***retrovirally*** expressing BCR-ABL (P210). We sought to determine whether JAK2 is required for red cell formation by P210. Using a bicistronic MSCV- ***IRES*** -GFP vector, we generated high titer ***retroviral*** supernatants to transduce day12 JAK2-/- FLC to express either P210, JAK2, or an empty vector. The cells were cultured in the presence of Steel factor (SF) and IL-6, and two days post-infection, GFP+ FLC were analyzed for their frequency of cells expressing the red cell marker Ter119. GFP+ JAK2-/- FLC infected with P210 generated as many Ter119+ cells as the ones infected with JAK2 and cultured in the presence of Epo+SF+IL-6. In addition, GFP+Ter119- FLC were selectively sorted and plated in methylcellulose in the presence of either SF+IL-6 (P210-infected cells) or SF+IL-6+Epo (JAK2 or control vector) and BFU-E colonies counted after 9 days. In the absence of Epo signaling, P210-infected cells generated as many BFU-E colonies as the ones infected with JAK2 and cultured in the presence of Epo. However, the presence of at least SF was required for P210-infected cells to generate BFU-E colonies from JAK2-/- FLC, an effect distinct from the one seen with EpoR-/- FLC.P210 or JAK2-generated BFU-E appeared to have similar size and morphology. RT-PCR on individual BFU-Es detected the expression of GATA-1, globin gene and EpoR in both P210 and JAK2-generated colonies. GFP+Ter119- cells were also assayed for their CFU-E content. P210-infected cells cultured in the presence of SF generated as many benzidine positive CFU-E as JAK2-infected cells cultured in SF+Epo. Taken together these data indicate that although JAK2 is constitutively phosphorylated in BCR-ABL-expressing erythroid cells, BCR-ABL does not require JAK2 for inducing red cell formation.

L5 ANSWER 8 OF 324 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

ISSN: 0042-6822.
DT Article
LA English
AB Most eukaryotic mRNAs are translated by a "scanning ribosome" mechanism. We have found that unlike the type member of the genus Tobamovirus, translation of the 3'-proximal ***coat*** ***protein*** ( ***CP*** ) gene of a crucifer infecting tobamovirus (crTMV) (Dorokhov et al., 1993; 1994) occurred in vitro by an internal ribosome entry mechanism. Three types of synthetic dicistronic RNA transcripts were constructed and translated in vitro: (I) "MP- ***CP*** -3'NTR" transcripts contained movement protein (MP) gene, ***CP*** gene and the 3'-nontranslated region of crTMV RNA. These constructs were structurally equivalent to dicistronic subgenomic RNAs produced by tobamoviruses in vivo. (II) "DELTA-NPT- ***CP*** " transcripts contained partially truncated neomycin phosphotransferase I gene and ***CP*** gene. (III) " ***CP*** -GUS" transcripts contained the first ***CP*** gene and the gene of Escherichia coli beta-glucuronidase (GUS) at the 3'-proximal position. The results indicated that the 148-nt region upstream of the ***CP*** gene of crTMV RNA contained an internal ribosome entry site (IREScp) promoting internal initiation of translation in vitro. Dicistronic ***IRES*** - ***CP*** , containing chimeric mRNAs with the 5'-terminal stem-loop structure preventing translation of the first gene (MP, DELTA-NPT, or ***CP*** ), expressed the ***CP*** or GUS genes despite their 3'-proximal localization. The capacity of crTMV IREScp for mediating internal translation distinguishes this ***CP*** tobamovirus from the well-known-type member of the genus, TMV U1. The equivalent 148-nt sequence from TMV RNA was incapable of mediating internal translation. Two mutants were used to study structural elements of IREScp. It was concluded that integrity of ***IRES*** - ***CP*** was essential for internal initiation. The crTMV provides a new example of internal initiation of translation, which is markedly distinct from IRESs shown for picornaviruses and other viral and eukaryotic mRNAs.

L4 ANSWER 12 OF 12 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 5
AN 1995:361093 BIOSIS
DN PREV199598375393
TI MRNAs containing the unstructured 5' leader sequence of alfalfa mosaic virus RNA 4 translate inefficiently in lysates from poliovirus-infected HeLa cells.
AU Hann, Louane E.; Gehrke, Lee (1)
CS (1) M.I.T. Build. E25-545, Cambridge, MA 02139 USA
SO Journal of Virology, (1995) Vol. 69, No. 8, pp. 4986-4993.
ISSN: 0022-538X.
DT Article
LA English
AB Poliovirus infection is accompanied by translational control that precludes translation of 5'-capped mRNAs and facilitates translation of the uncapped poliovirus RNA by an internal initiation mechanism. Previous reports have suggested that the capped alfalfa mosaic virus ***coat*** ***protein*** mRNA (AlMV ***CP*** RNA), which contains an unstructured 5' leader sequence, is unusual in being functionally active in extracts prepared from poliovirus-infected HeLa cells (PI-extracts). To identify the cis-acting nucleotide elements permitting selective AlMV ***CP*** expression, we tested capped mRNAs containing structured or unstructured 5' leader sequences in addition to an mRNA containing the poliovirus internal ribosome entry site ( ***IRES*** ). Translations were performed with PI-extracts and extracts prepared from mock-infected HeLa cells (MI-extracts). A number of control criteria demonstrated that the HeLa cells were infected by poliovirus and that the extracts were translationally active. The data strongly indicate that translation of RNAs lacking an internal ribosome entry site, including AlMV ***CP*** RNA, was severely compromised in PI-extracts, and we find no evidence that the unstructured AlMV ***CP*** RNA 5' leader sequence acts in cis to bypass the poliovirus translational control. Nevertheless, cotranslation assays in the MI-extracts demonstrate that mRNAs containing the unstructured AlMV ***CP*** RNA 5' untranslated region have a competitive advantage over those containing the rabbit alpha-globin 5' leader. Previous reports of AlMV ***CP*** RNA translation in PI-extracts likely describe inefficient expression that can be explained by residual cap-dependent initiation events, where AlMV ***CP*** RNA translation is competitive because of a diminished quantitative requirement for initiation factors.

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